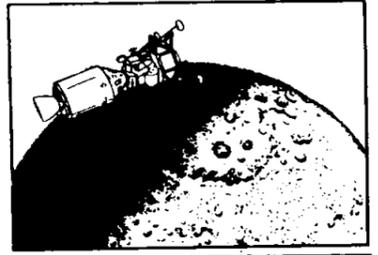


ROUNDUP



NASA LYNDON B. JOHNSON SPACE CENTER

HOUSTON, TEXAS

Vol. 13 No. 21

Friday, September 13, 1974



OBSERVING MODEL—U.S. Astronauts and Soviet Cosmonauts observe a model of the docked Apollo and Soyuz spacecraft. The cosmonauts arrived in Houston Sunday to begin three weeks of training at JSC with the astronauts.

Cosmonauts Train At JSC; U.S. Reps Meet In Moscow

Soviet cosmonauts assigned to next summer's joint space mission with the United States arrived in Houston, Sunday, September 8, to begin three weeks of training at the Johnson Space Center. On the same day, a large delegation of U.S. engineers and specialists reached Moscow to take part in technical and management meetings on the Apollo-Soyuz Test Project.

The eight cosmonauts training here are prime crewmen Aleksey A. Leonov and Valeriy N. Kubasov and backup crewmen Anatoliy V. Filipchenko, Nikolay N. Rukavishnikov, Vladimir A. Dzhanibekov, Boris D. Andreyev, Yuriy V. Romanenko and Aleksandr S. Ivanchenkov. They are accompanied by six specialists and a ninth cosmonaut, Major General Vladimir A. Shatalov, Chief of Cosmonaut Training for the U.S.S.R.

Major Shatalov, in a press conference held Wednesday at JSC, discussed the recent Soyuz 15 mission. He emphasized that the docking mechanism used on this mission was in no way related to the joint equipment that will be used on ASTP.

General Stafford remarked, "We are firmly convinced that the flight of Soyuz 15 has no direct bearing to Apollo-Soyuz." ASTP preparations, he added, are well on schedule for launch next July.

The joint training with American astronauts will end September 27. It will include flight simulations, procedures training in Apollo and docking module mockups, communications training and study of spacecraft systems.

U.S. astronauts assigned to ASTP completed a 3-week training period in the Soviet Union

last July 12. Joint crew training is planned again in both countries next spring. Prime crewmen for the U.S. are astronauts Thomas P. Stafford, Vance D. Brand and Donald K. Slayton.

Dr. Glynn S. Lunney, U.S. Technical Director for ASTP, headed a 47-member group that arrived in Moscow last Sunday for a 2-week stay. Thirty U.S. engineers and technicians presently are completing a 3-week visit to Moscow.

Mrs. Harris Rejoins NASA

Mrs Ruth Bates Harris has rejoined NASA as Deputy Assistant Administrator of Public Affairs for Community and Human Relations.

From October 1971 to October 1973 she served NASA first as Director of Equal Employment Opportunity and then as Deputy Assistant Administrator, Office of Equal Opportunity Programs.

NASA Administrator Dr. James C. Fletcher, in announcing the appointment, said, "We sincerely welcome Mrs. Harris back to NASA and we look for significant achievements in her duties."

In her new position as deputy to John P. Donnelly, Assistant Administrator for Public Affairs, Mrs. Harris will be a major point of contact between the space agency and state and local governments and community groups across the United States.

Her work will involve detailing the importance of NASA's missions and their contributions to concerned community groups, including minorities, women, (Continued on Page 4)

Innovative Ideas Bring Cash Awards

William J. Boone, III (CH), injured his ankle and leg when he stepped on a recessed manhole cover in the Building 30 North Parking Lot. Anticipating that similar accidents might occur in the future, he suggested that the manhole cover be raised to the parking lot surface. His suggestion was adopted by the engineering Division and the project has been completed.

Another safety hazard was pointed out by Lawrence Kissinger (EC). He noticed that the power cards and receptacles for 24 card punch machines in Building 12 presented potential danger to employees in this area. Kissinger proposed a number of solutions to these hazards which were adopted by the Institutional Data Systems Division.

Sandra S. Burdsal, (CF), concerned about the paper shortage, proposed that Center-wide distribution of certain announcements and publications be discontinued. Her suggestion resulted in the elimination of the all-employee distribution of the NASA Awards Ceremony brochures.

Attention Picnickers!

Remember that only the 2nd Street gate will be open for the annual JSC picnic. All parking will be on the lots bordering 2nd Street including lots 36, 30, 25, and 45. Tickets will be required to board the shuttle buses which will carry passengers to the picnic area.

Handicapped persons unable to board a bus should inform the guard at the gate who will issue special passes enabling them to park closer to the picnic area.

Only those employees who attended the ceremony last spring received the brochures.

Throughout the year, many JSC employees submit innovative ideas which help to improve the Center in a number of ways. These employees receive cash awards for their suggestions, if

they are implemented.

Other employees are awarded for inventions which have potential industrial use or may be used for space flights.

One such invention is the "Subject Monitoring System" developed by Dr. Sam L. Pool (Continued on Page 4)

Author Focuses on ERTS

Lloyd Darden, western manager of Plastics Industry, Inc. has written a book which focuses on NASA's Earth Resources Technology Satellites Program (ERTS).

Entitled "The Earth in the Looking Glass," the book emphasizes the genesis and development of ERTS, describing in non-technical language the purpose and goals of the agencies involved in the program. Darden explains how the satellites, through sophisticated remote sensing techniques, extend man's sight by "photographing"

the entire surface of the earth in various wavelengths.

In his book, Darden emphasizes that benefits resulting from ERTS are among a long line of spinoffs emerging from space technology.

Published by Anchor Press Doubleday, "The Earth in the Looking Glass" will be available in bookstores throughout the country in October. Following is an excerpt from the book.

"A funny thing...happened on the way to the moon; someone had looked back at the earth." (Continued on Page 3)

McConnell, Jenkins Assume New Duties

Dr. Dudley G. McConnell recently was appointed Assistant Associate Administrator for Applications by NASA Administrator Dr. James C. Fletcher.

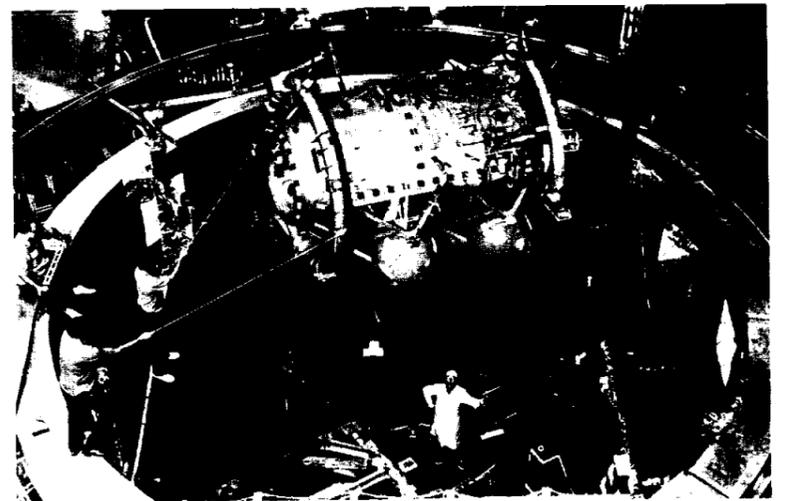
At the same time, Dr. Fletcher announced the promotion of Dr. Harriett G. Jenkins to succeed Dr. McConnell as Assistant Administrator for Equal Opportunity. Dr. Jenkins has been Dr. McConnell's deputy since February.

"Since NASA's Equal Opportunity Program is now well established, underway and producing results, and since Dr. McConnell

as expressed a desire to return to the scientific field, where he attained prominence, we want to take advantage of his experience and ability to manage technical programs," Dr. Fletcher said.

Dr. Fletcher pointed out that during the period NASA's equal opportunity programs were administered by Dr. McConnell, overall minority employment within the agency increased by almost 11 percent and minority professional employment increased by 15 percent.

In his new position, Dr. (Continued on Page 4)



ASTP DOCKING MODULE—Flight article ASTP Docking Module (DM-2), above, is being lowered into chamber B of the Space Environment Simulation Laboratory in Building 32 for pre-flight altitude tests which will include manned tests with the American crewmen. Earlier tests were run in chamber B using a test model of the docking module.

Maybe Not The First In Space, But Certainly The Best!

By Bruce E. Hicks
Science Writer
United Press International

Jeanne Leventhal is a pretty 18-year-old girl who doesn't care if she's the first woman scientist-astronaut in space, but she firmly declares she'll be the best.

The curvaceous teen-ager is already a senior at the University of California at Berkeley and is waiting word on acceptance to medical school next year.

"I don't want to be the first female astronaut. That's a goal without backing," she said. "It doesn't bother me whether I'm female or male. I'm just going to be the best."



I'LL BE THE BEST!—Jeanne Leventhal, above, was one of the 25 students who prepared experiments for the Skylab flights. Presently, she is a senior at the University of California at Berkeley and is hoping to go to medical school next year. She declares she'll be the "best" scientist-astronaut in space someday.

Jeanne, who graduated from high school at age 15, is determined to stay with the space business. She wedged in as a high school senior when selected as one of the 25 students who prepared experiments for the three Skylab flights last year.

Her experiment—X-Rays from Jupiter—was in astrophysics, but medicine attracts her attention now. She was attending the Skylab Life Sciences Symposium at the Johnson Space Center.

"I wanted to go into astrophysics in high school," she said. "But when I went to college, I had to sit down and say 'Hey, do you really want to spend the rest of your life in astrophysics?' I decided I wanted to continue learning in that field, but that medicine offered more involvement with people."

The 5-foot-5 brown-haired scholar majored in biochemistry and plans on medical school at Columbia, Harvard, Yale or Rockchester. Then into the specialized area of aerospace medicine.

The Space Shuttle project of the 1980s couldn't have been better timed for Jeanne.

"By the time I get through

medical school and aerospace training, Shuttle should be ready to fly," she said. "I plan to keep all my contacts at NASA and be ready to participate in Shuttle."

Although no woman has yet been seriously considered for the astronaut corps, it's certain that women will fly aboard the reusable shuttle craft for scientific work in orbit.

"Good science is never done unless done by a person who conceived the experiment," Jeanne declared. "That person can make snap decisions to improve the tests. When someone else does it, then you get only the answer you originally sought and not what might be available."

"I don't think it's a crazy thing to want to go up and do your own experiments. Jacques Costeau and polar scientists go where their research takes them. If you do it yourself you take full responsibility or blame for the results."

ERTS

(Continued from Page 1)

Quite spontaneously, that had been the beginning of the era now to become so significant. The view of the earth from space proved exhilarating, not only for the astronauts, but for all those who looked at the pictures they brought back from their missions. Several happenstance photographs of the earth had stimulated scientists to begin studying satellite pictures, casually at first, until they realized how much earth detail they could distinguish. Meteorologists had already evidenced strong interest in satellite pictures. Now geologists did the same, and one by one the scientific disciplines—agriculture, forestry, oceanography—embraced the knowledge of this new medium and wedded themselves to it.

The casual study of pictures gave way to more serious projects which eventually coalesced into plans for ERTS and Skylab, two satellites designed to introduce a new technology known as "remote sensing."

...By the time the 1960's and the golden era of space engineer-

Jeanne, who has two older brothers and a younger sister, lives at home, five blocks from the Berkeley campus. Her father, Leon Leventhal, is a nuclear chemist and general manager for LFE Environmental Co., Analysis Laboratories Division.

Her bubbling enthusiasm spills over in chuckles when she discusses her personal future.

"Marriage is out until medical school is over," she contends. "When I meet someone I want to marry, I will. I haven't met anyone who's really knocked me out yet."

"Destiny takes care of itself. Marriage is something that happens naturally. When I do consider marriage, I'll probably go to the library, research everything they have about it and decide if it's for me."

"I have an intellectual curiosity about everything. Marriage would have to stimulate that for it to be good."

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JSC Personality Profile: Greg Hayes

Although JSC employee Greg Hayes has high ambitions, he doesn't sit around thinking out long-range objectives. "That limits my options," he says, "My immediate goal is to become more proficient at what I'm doing. If I become better at what I'm doing, then the opportunities will present themselves to me and I'll have a wide range of opportunities from which to choose."

Greg is a Personnel Management Specialist responsible for servicing all personnel data for employees in the Program Offices and the Engineering Division.

Greg admits that he is a gregarious person. Perhaps this characteristic lead him to his present career at JSC. One of his college professors told him about the Management Intern Program which is designed to develop capable administrative professionals to perform the complex functions involved in a Research and Development Administration.

Greg was accepted into the Intern Program at JSC, which during the training phase, involved rotational assignments in several directorates at the Center.

"During the rotational assignments, I was impressed with a number of areas, but personnel seemed to offer the most variety and excitement," Greg related, "Probably the fact that I would be working directly with people made this area more attractive to me," he said.

A native of Colorado, Greg received his B.A. degree in political science from Colorado State

University. While in school, he was affiliated with a number of organizations including the student Council and the Faculty-Student Planning Committee.

Greg's father was a civil service employee whose job required the family to move a great deal. They spent seven years in Europe, seven years in Washington, and a number of years in California.

Greg feels that his traveling experiences have enhanced his ability to communicate with people. "In traveling, you come into contact with so many different types of people. It really helps to broaden your perspective of life, too," he says.

It took him a while to get used to Texas' flat landscape, "I miss the Colorado mountains," he reflected. But basically Greg has adjusted well to the area.

He's an "outdoors man" and enjoys participating in sports. He is a member of the Sons of Poland Athletic Club (SoPac). This club is active in volleyball, basketball and softball. Currently, they are preparing for the fall softball season.

For the past two years, he has helped plan the annual JSC picnic. This year he is assigned to organized sports.

Greg also finds canoeing very enjoyable. He and a friend recently purchased a canoe and plan to take it out in the water as often as possible.

As dedicated as Greg is to his job at the Center, he feels that participation in other activities are important in developing a well-rounded person, "I try to



take advantage of as many different activities that are going as I can," he related, "No matter where you are, there are places to find good entertainment. I spend my time trying to find those places."

The primary factor to remember he re-emphasized, "is to do the best at whatever you happen to be doing at the time!"

Exciting Trips!

The Aerospace Employees Travel Club is planning an active travel schedule for the next few months. The planned trips include, San Antonio, New Braunfels, November 1, 1974; Caribbean cruise from Miami to Haiti, Puerto Rico, Virgin Islands and the Dominican Republic, December, 1974; Colorado ski trip, January, 1975; Central America, February, 1975; Europe, May 1975.

Other trips being considered include South America, London, Hawaii and Russia. For information call Hal Parker, X6321.



OBSERVING RAT—Kathy Stockton, seated and Ricky Alford, both of Southeastern State College observe a rat for symptoms of toxic poisoning in JSC's Toxicology Laboratory. They are participating in NASA's National Aerospace Fellowship Program.

Roundup Swap-Shop

Swap Shop advertising is available to JSC and on-site contractor personnel. Articles or services must be offered as advertised, without regard to race, religion, sex or national origin. Ads should be 20 words or less, including home telephone number. Name and office code must accompany, but need not be included in ad copy. Typed or printed copy must be received (AP3 Attn: Roundup) by Thursday of the week before publication.

MISCELLANEOUS

Sears Kenmore, 2 burner elec hotplate, used once, \$5 Tiedemann, 483-5481.

8 hp riding mower, elect. start 38" used 6 mo. Briggs eng, li nw, retails \$749, sell \$549, 543-3871 aft 5:30.

Glass and wire cage for small animal, \$15. Rubenstein, 334-2354.

Stereo tape recorder, reel to reel, full capability, dual speakers, cables, operations and maintenance manuals, Philips Professional model, \$85. G. Gibson, 482-1801.

Combo organ, Farfisa keyboard w/ one octave foot pedals, kustom 100 watt AMP/speaker, heavy duty carry cases, \$800, Overton tel. 4623 or Dickinson, 534-2476.

2 season football tickets, Rice Univ, 50 yd line, 22nd row, incl UH, LSU, TU, \$70 (plus reserved parking) 488-0148 aft 6.

66 keyboard Marco Polo piano, collectible item, drk mahogany, xint cndn, \$450, Statz, 482-7607.

4 Whitewall tires, 600-13, 2 w/ good rubber, all four \$25, 481-2327.

Fireplace wood yours for the cutting, Satterfield, x2872.

Two Sears best "futurist" duce draw traverse rods for curtains, 50" to 90" extension, new, \$5 ea. Bauch, 483-5987 or 333-3382 aft 5.

HOUSEHOLD ARTICLES

Wrought iron and wood bar from Mexico, 60" x 42" x 24", 3 adjustable shelves, xint for tv-stereo unit, \$100, Whittington, 488-4394.

Modern corner grouping, 2 bds, 2 bolsters, lrg corner table, bl/wh checked covers, \$125, hardly used, 488-6828 aft 5.

Pool table 3x6 particle board bed, wall rack and accessories li nw, \$75, 644-5924 aft 5.

VEHICLES

71 Honda 175 street/trail bike only 2900 miles, \$250, 333-3814.

Boy's 20" Schwinn Sting Ray bike, gd cndn, \$25, 488-1100.

2 bdrm mobile home cntrl air/heat, washer/dryer, large util bldg, low eq, \$90 mo notes, 471-5236.

64 Olds Vista-cruiser, 3 seat sta wgn, pwr str, brakes, gd cndn, \$225, Lauritzen, 944-3615.

73 Mazda RX3 sta wgn, air, standard, tape, 19000 mi, \$2900, 488-5259.

Hd-tp tent trailer, sleeps 4, lrg beds, opens to 7'x14', \$350, 554-3778.

72 Camaro, clean, loaded, 488-1514 aft 5, Klotz, 5581.

Cat mini-bike auto clutch, clean, 488-1514 aft 5, 5581.

73 Harley-Davidson, sx 350, xint cndn, 3700 mi, \$850, aft 5, 485-4995.

73 Toyota Corolla, 2-dr Coupe, auto, air, blue, 27 mpg, Thomas, 488-4371.

67 Olds Cutlass Supreme, 2-dr Coupe, auto, air, cruise control, 400 cu. in., green, Thomas, 488-4371.

66 Ford st wgn, nw paint, body work, a/c, am/fm radio, auto trans, ps, pb, gd 2nd car, \$600, Overton, 4623 or Dickinson, 534-2476.

72 Honda 750, xint cndn, 1w mi, \$1500, 331-3674, Morgan.

67 Ford LTD, white, 4-dr, ht, a/c, radio, vinyl interior, nw tires, swank 2nd car, \$550, aft 6, 488-0148.

71 Honda CL 100S, xint running cndn, blue, 333-3291.

Sears mini-bike, 5 1/2 hp motor disassembled, includes nw parts, \$75, 488-1326 aft 5.

69 Ford Custom 500, 4-dr, 48,000 actual mi, air pw, mechanically prfct, cream puff cndn, \$1100, 477-3808 aft 5.

70 Pontiac Lemans, gd cndn, 2-dr, air, pwr, Joslyn, 483-2501 wkdays, 986-5394 aft 5.

65 Merc 4-dr ht, nw brakes, less than 55,000 actual mi, gd cndn, nw retread tires, \$300, 488-2631 aft 5.

PROPERTY AND RENTALS

Log cabin on Lake Woodville, 1/2 acre, Bulk-

head/pier, furnished to sleep 6, ac, refrig, elec range, Franklin fireplace, dishwasher, \$17,500, Overton, 4623 or Dickinson, 543-2476.

Two adjacent 50'x150' Gulf Front lots, Tidelands sub-division, Boliver Peninsula, 48mi from JSC, \$4500 firm, Cherry 4909.

Nassau Bay, owner, 4-2 1/2-2, heated pool and big tropical plants 333-3511.

Fairmont Park, 4 bdrm, 3 baths, 2060 sq ft, 5 1/2 percent, buy equity or sell for \$29,500, 471-0716.

Wooded corner lot in section 3 Elkins Lake, \$7,500, 471-0716.

BOATS

Republic glass-lined, 40 gal natural gas water heater, bst ofr, 488-1100.

14 ft Prosky Runabout, 25 hp OMC big wh trailer, gd cndn, \$350 Ferguson, 2581 or 482-7910.

72 ranger tournament model bass boat, 60 hp evinrude SST/owr tilt, McClain D/O trailer, motor guide, etc, nw cndn, \$3000, Gentry, 488-3703.x4471.

Rebel Sailboat and trailer with xtra sail, make ofr, Keese, 334-1155.

Brand new Larson XL-5, used twice, beautiful, must sell, lots of xtras, \$2200, Allgeier and McMonigal, 333-2726.

PETS

AKC reg Irish Setter pups, \$100-\$125, 433-3115.

Appaloosa mare, xint for games, vry fast, 6-7 yrs old, Cary, 482-7967.

Sorrel Gelding, \$200, bay pony w/ tack, \$100, both gentle for children, 471-2739.

WANTED

Outboard boat motor in good working condition, 7-12 hp, Stanley, 488-5506.

Mini-bike in xint cndn, prefer 3 1/2 hp, Autery 472-5956.

Large desk, gd cndn, Maris, 482-3596 aft 5.

LOST AND FOUND

Men's bifocal glasses, gray frames, found in parking lot of building 31, see Coennen, rm 234, bldg 31.

Radio Club Plans Ham Gear Auction

Bring that gear that you have been wanting to sell, or buy something at a price you can't afford to pass up at the Ham and Gear Auction that will be conducted by the JSC Amateur Radio Club and Tidelands Amateur Radio Society on September 21.

The auction will be held from 10 a.m.—4 p.m. at the Community Public Service Company of Texas City Building, 702 36th St. N. (Highway 146 at Palmer Highway). Doors will open at 8 a.m. for gear set-up and tagging. Only gear that is in good working condition or that is serviceable will be accepted for auction.

The clubs will net ten percent of the selling price for each item up to \$5 per article and ten percent up to \$1 per item redeemed by its seller.

Coffee, doughnuts, soda, etc. will be available at nominal cost.

For further information call Ed Hamblett, W5BH at 483-4031, 8:30 a.m.—5:00 p.m. or 471-0348

Shrine Circus

It's time for NASA Night at the Shrine Circus again. JSC will have the best seats in the house (\$5.50) for \$2.75. Our night is Sunday, October 13 at 6:00 p.m. Tickets are available in the Building 11 Exchange store. Get yours today!

after 6 p.m., or Don Wiseman, W5KSV at 483-4760 or 534-3802 (hours as above).

Contract Awarded

How man may assemble, repair and maintain spacecraft in earth orbit is the subject of a 12-month, \$300,000 contract awarded by NASA to the Martin Marietta Corporation in Denver, Colorado.

NASA has requested that Martin study the utilization of the manipulative devices, now planned for use in the Orbiter 60-foot long cargo bay, as well as utilization of the "Buck Rogers" type astronaut maneuvering unit successfully operated during the recently concluded 8-month long Skylab Program. The study will also include the use of simple docking or mating systems for the assembly of modular soace systems in orbit.

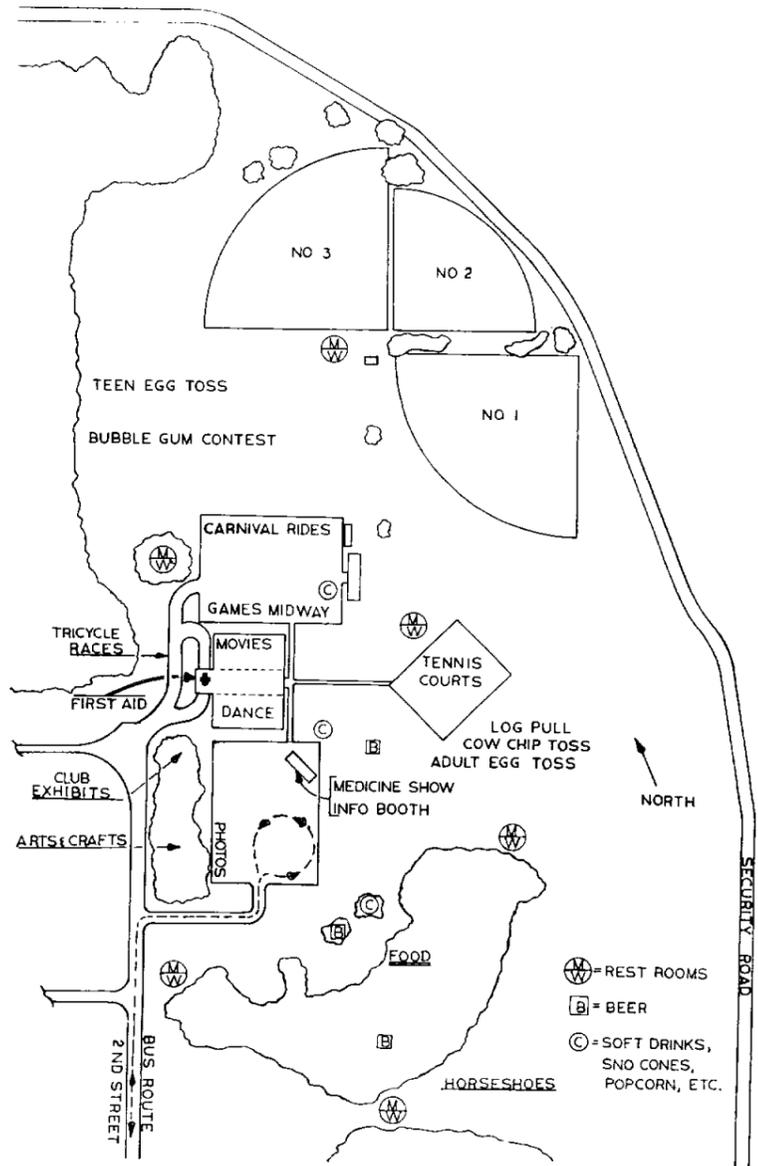
Martin will also analyze the varying degrees of human skills and dexterity, as well as identify what projected state of the art or other ancillary equipment will be required to perform man's first major in-space assembly, maintenance and repair work.

Martin will make quarterly progress reports to JSC and is scheduled to have its final report prepared by the end of the 12-month contract.



HEAT LOADS STUDIED—One of the recent space shuttle-related tests completed at Air Force Systems Command's Arnold Engineering Development Center involved the heat rate that will accumulate on the nozzles of the orbiter's main engines during re-entry into the earth's atmosphere. In order to disturb the Mach 8 airflow around the rear of the craft as little as possible, the model was mounted in an inverted position with the support taking the place of the craft's vertical control surface. The tests were conducted for NASA by personnel of ARO, Inc., the center's operating contractor, using a one and three-fourths per cent scale model. VKF craftsman R.G. Rainey in photo.

Map of Picnic Activities



Picnic Schedule

- 9:30 - 6:00 BUS SERVICE
- 11:00 - 5:00 CONCESSIONS - SOFT DRINKS, COTTON CANDY, SNO CONES, POP CORN
- 11:00 - 5:00 "ZAY WYNN" THE CLOWN
- 11:00 - 5:00 SILLY PHOTOS (BRING YOUR CAMERA)
- 11:00 - 5:00 CARNIVAL RIDES - GAMES MIDWAY
- 11:00 - 5:00 ARTS & CRAFTS EXHIBITS - CLUB EXHIBITS
- 11:00 - 5:00 BEER
- 12:00 - HORSESHOES
- 12:00 - 3:00 FOOD SERVICE
- 1:00 - 4:00 ROCK BAND - "WOODEN LEG" - GYM
- 1:00 TENNIS EXHIBITION

MEDICINE SHOW ENTERTAINMENT SCHEDULE

- 12:00 - 12:45 BUFFALO BULLFROG AND THE BLUEGRASS BRIGADE
- 1:00 - 1:45 WHEATSTONE BRIDGE (COUNTRY & WESTERN)
- 2:00 - 2:45 THE HENRYS (OLD TIME FIDDLERS)
- 2:45 - 3:30 BUFFALO BULLFROG AND THE BLUEGRASS BRIGADE
- 3:30 - 4:15 WHEATSTONE BRIDGE

AUDITORIUM ENTERTAINMENT SCHEDULE

- 12:30 - 1:30 CARTOONS
- 2:00 - 2:30 McLAIN SISTERS - TAP, JAZZ AND ACROBATICS
- 3:00 - 4:00 CARTOONS

SUBTEEN EVENT

- 3:30 BUBBLE GUM CONTEST

TEEN EVENTS

- 4:00 TRICYCLE RACES
- 4:30 TEEN EGG TOSS

ADULT EVENTS

- 3:30 LOG PULL
- COW CHIP TOSS
- ADULT EGG TOSS
- (RUN CONSECUTIVELY)

Blood Bank

The JSC Blood Bank is happy to announce that there were more donor volunteers than could be handled on the last scheduled day. As a result, an additional day, September 18 has been scheduled at Gilruth Recreation Center for blood donors. All federal and contractor employees at JSC are eligible to become members of the JSC Blood Bank. For an appointment or information, call Les Wynn, X3428 or Helon Crawford, x 3809.

ROUNDUP

NASA LYNDON B JOHNSON SPACE CENTER HOUSTON TEXAS

The Roundup is an official publication of the National Aeronautics and Space Administration Lyndon B. Johnson Space center, Houston, Texas, and is published every other Friday by the Public Affairs Office for JSC employees.

Editor: Janet Wrather

Photographer: A. "Pat" Patnesky

Air Traffic Congestion May Be Alleviated Soon

NASA is validating techniques that may help alleviate air traffic congestion caused by aircraft wake-vortices.

Aircraft wake-vortices, hazardous coil-like cylinders of rapidly spiraling air, trail from the wing tips of moving aircraft and can interfere with smaller aircraft flying close behind, according to Alfred Gessow, chief of the Fluid and Flight Dynamics Branch, Office of Aeronautics and Space Technology, NASA Headquarters. Additional spacing between aircraft during takeoff and landing operations is currently being used to insure flight safety.

Such spacing delays limit the number of takeoffs and landings that can be made in a given time. NASA is investigating methods either to suppress initial formation of high intensity vortices or to promote their early dissipation once they are formed.

"The problem of trailing vortices severely curtails optimum use of our nation's airports. Departure and arrival holding practices to insure safety result in increased fuel consumption," Gessow said. Results from NASA research and technology in the foreseeable future could contribute to maximum use of air facilities and thus help handle the ever increasing volume of air traffic."

Developments permitting reduction of standard separation distances between aircraft; thus reducing departure and arrival

delays, include procedures known as "span-load tailoring" and "turbulence introduction."

Span-load tailoring, achieved through flap modification, is aimed at reducing the strength of the wing-tip vortex. Turbulence may be introduced to break up the vortex in a number of ways, including using redirected engine blasts and the addition of trailing plates and splines (finger-like protrusions) behind the wings.

Results from wind tunnel and water channel tests indicate that removing the outboard flap on a model of a Boeing 747 and adding a trailing spline reduces the wing tip vortex to the point that the takeoff separation between a Boeing 747 and a following Lear Jet or DC-9 can be reduced from five miles to less than two miles.

NASA's Flight Research Center, Edwards, Calif., is conducting inflight tests of changes in span-load distribution and engine-induced turbulence.

The Boeing 747 scheduled for use in the Space Shuttle Program is being used.

A Lear Jet and a T-37 aircraft are used for the takeoffs following a larger airplane to test and record the effects of the reduced or broken vortices on smaller planes at takeoff.

Research teams are examining ways to minimize any penalties the new techniques may introduce into efficient airport operations.

"Dirty Work" Opens CCCT's Fall Season

Contrary to popular opinion about "Friday the thirteenth," September 13, should be a lucky night for the Clear Creek Community Theatre (CCCT) in League City. This date marks the opening of CCCT's fall season with the Gay Nineties melodrama, "Dirty Work at the Crossroads," or "Tempted, Tried and True."

Initially produced in 1890, the play features favorite songs of the period, such as "All That Glitters is not Gold"; and "More to be Pitied Than Censored." Pianist-accompanist is Ray Schmidt.

Director Jakey Wood, retired JSC employee, calls this "shirt-sleeves production" a family melodrama that may be attended in casual attire.

The ten-member cast include Andrea Miller, Roy Jones, Gus Bab (JSC), Darwin Miller, Pat Kuhlmann, Sis Browning, Pamela Hathaway, Amy Stanford, Barbara Stanford and Susan Shore. Stage manager is Dave Stanford.

Season tickets will be available throughout the play which will run Friday and Saturday nights at 8:15 p.m. from September 13 through October 5.

Call 332-2931 for ticket reservations.

VIRGO

The discriminating, intelligent, hard-working Virgo is a perfectionist. Though practical, you find it hard to accumulate money because your high standards lead you to excessive spending.



ANNETTE MARSH

Ideas

(Continued from Page 1)

and Norman Belasco, along with six employees of Lockheed and Boeing. The microminiature system allows the monitored subject to move about freely. It is anticipated that the device will be used on the Space Shuttle Program.

Jeri W. Brown (EW), invented a reduced gravity fecal collector seat and urinal capable of accommodating both male and female users. Developed at Marshall Space Flight Center to support manned simulations of Spacelab-type vehicles, the seat and urinal can be attached to both reduced and one-g waste collector/processing systems, providing a comfortable, yet inexpensive person-machine interface.

Many ideas and discoveries are presented in tech briefs.

Dr. Norman Heidelbaugh and Dr. Paul Rambaut (DB) authored a tech brief relating their discovery that potassium gluconate is an excellent supplementary source for potassium and has no unfavorable side effects.

Dr. Heidelbaugh also authored a tech brief which describes a treatment prior to freeze-drying developed for green beans. The treatment preserves the flavor and texture of the beans during rehydration.

Herbert S. Kobayashi (EE) received awards for two tech briefs describing solutions to problems in the electromagnetic transmission of certain data.

Also receiving cash for two tech briefs was Leo G. Monford (EZ). One brief describes a relatively inexpensive, closed-loop telephone system that has many features conducive for private network phones. The other brief focuses on a binary coding system that simplifies many types of measurements by using 3-bit binary words to count numbers from 0-99.

Joe F. Melugin and David O'Brien (EG) developed a simple technique to restore heat damaged tapes.

SHE'S AT IT AGAIN!—One of JSC's most dynamic employees, Shirley Price of the Employee Development Office is shown participating in two of her many assignments. In the photo at left, Shirley, second from left, listens attentively to Dr. Harriet Jenkins, NASA's newly appointed Assistant Administrator for Equal Opportunity, at a convention held recently in Detroit by a group of black business and professional women. In the photo at right, Shirley serves as a tour guide to members of United Cerebral Palsy. The group visited JSC August 22 to view the Center and to obtain information on possible employment here.

Secretary Able To "Switch Horses" Gets Plaque, Cash

Most top Center personnel and other employees agree that JSC's daily activities and mission operations could not be accomplished as smoothly without the efficient support provided by the Center's secretaries. Each month an "outstanding secretary" is presented a plaque and a check for \$100 in appreciation of her contributions to the Center.

Mary Annette Marsh was the honored employee for August. She is secretary to James W. Thompson, Chief of the Government Equipment Furnished (GFE) Provisioning Branch, Integration Division, Program Operations Office.

The GFE Provisioning Branch has functioned in a somewhat

unique position over the past several years, providing simultaneous support in the GFE and crew station loose equipment stowage areas to the Apollo, Skylab, and Shuttle program offices.

Mrs. Marsh has provided excellent support through her ability and her willingness to perform duties as required in support of total program goals. According to Thompson, she has shown much initiative in becoming more efficient in her position and has demonstrated the capability to "switch horses" from one program to another and to place emphasis on each program at the proper time and in the most efficient manner.

"Mrs. Marsh has excellent secretarial skills, has proven to be totally dependable and loyal and adjusts her personal schedule to accommodate the requirements of her position," Thompson remarked. He added that she saves the personnel whom she supports much time by her "personal knowledge of what to do in the many situations faced in working for so many programs."

One such example is her performance during the Skylab mission. As a result of the problems with the micrometeoroid shield during Skylab 1, there were additional Command Module (CM) stowage requirements, which significantly increased Mrs. Marsh's workload. Program Management Control Board (CCB) meetings were held as often as three times a week over a period of several months requiring an unusually large amount of typing, copying and distribution of complex material.

In order to support the rapid turnaround times between meetings, it was necessary to type from raw data which were hand-marked with changes. Because of her familiarity with the Skylab GFE and stowage system and associated documentation, she was able to call attention to mistakes made by the engineers in their haste to prepare the handwritten drafts.

Thompson related that although Mrs. Marsh worked hard and sometimes long hours in accomplishing her tasks, she continually maintained her poise, her pleasant personality and her cooperative manner in getting the job done.

New Duties

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McConnell will be primarily responsible for developing a coordinated planning capability and a systems analysis function for the agency's space applications program.

Before joining NASA in February, Dr. Jenkins was educational consultant for the Response to Educational Needs Project of the Anacoatia District of District of Columbia Schools.

She earlier served as Assistant Superintendent for Instruction in the Berkeley School District of California, culminating a long tenure as a district school official.

Rejoins NASA

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senior citizens and the handicapped.

In addition, she will develop NASA's role in improving the quality of engineering and science education at colleges and universities which have a significant or predominant minority or female enrollment.

At NASA, Mrs. Harris' activities will require her to work closely with the Educational Program Division, Office of Facilities, Office of University Affairs, Office of Personnel and the Office of Equal Opportunity Programs.

Join the Payroll Savings Plan.

